Claims

1. A Component (3, 17) for an optical communication network, comprising a source (6) for an optical information signal, an output port (11) for outputting the optical communication signal on an optical transmitting fibre (1), a light sensor (14; 15), and an optical circulator (9) for transmitting the optical information signal from the source (6) to the output port (14; 15) and for transmitting light reflected or arriving from outside at the output port (11) to the light sensor (14; 15), characterised in that the light sensor (14, 15) has an evaluating circuit (13) connected to it for detecting a time delay between a time marker of a light signal from the source (6) and a corresponding time marker of light arriving at the light sensor (14; 15).

2. The component of claim 1, characterised by means (8') for transmitting the detected value of the delay in the communication network.

3. The component of claim 1 or 2, characterized in that the source (6) provides a frequency-division multiplex communication signal and that the light sensor (14; 15) is selectively sensitive for part of the frequency components preferably for a single frequency component, of the frequency-division multiplex communication signal.

4. The component of claim 3, characterized in that the part of the frequency components for which the light sensor (14; 15) is sensitive comprises a filling channel.

5. The component of claim 3 or 4, characterized in that the part of the frequency components for which the light sensor (14; 15) is sensitive comprises an OSC channel.

6. The component of one of the preceding claims, characterized in that it further comprises an input port for connecting to an optical receiving fibre, an optical switch (16) and a receiving portion (15), which is adapted to be selectively connected to the receiving fibre (1) or, as the light sensor, to the circulator (13).

7. The component of claim 5, characterized in that the receiving part is an OSC receiver.

8. The component of claim 5 or 6, characterized in that the switch (15) is controlled based on the intensity of light returning from the output port (11) to the circulator (9)

9. The component of one of the preceding claims, characterized in that it comprises means (13, 8, 6) for reducing the power of the optical communication signal at the output port (11), if the light intensity returning from the output port of the circulator (9) exceeds a limit.

10. The component of claim 9, characterized in that the evaluation circuit (13) is adapted to determine the time delay only if the power of the optical communication signal is reduced.

11. The component of one of the preceding claims, characterized in that a tap (10) for monitoring the communication signal transmitted by the source (6) is provided between the circulator (9) and the output port (11).

12. An optical communication network comprising at least one bi-directional optical fibre (1, 2), characterized in that at both ends of the fibre (1, 2) a component (3, 17) according to one of the preceding claims is connected.